



United Kingdom of Great Britain and Northern Ireland

EDICT OF GOVERNMENT

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BS NA EN 1998-6 (2005) (English): UK National Annex to Eurocode 8. Design of structures for earthquake resistance. Towers, masts and chimneys

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We will sell to no man, we will not deny or defer to any man either Justice or Right.*

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NATIONAL ANNEX

**UK National Annex to
Eurocode 8: Design of
structures for
earthquake resistance –
Part 6: Towers, masts and chimneys**

ICS 91.120.25



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Summary of pages

This document comprises a front cover, an inside front cover,
pages i and ii, pages 1 to 4, an inside back cover and a back cover.

National Annex (informative) to BS EN 1998-6:2005, Eurocode 8: Design of structures for earthquake resistance – Part 6: Towers, masts and chimneys

Introduction

This National Annex has been prepared by BSI Subcommittee B/525/8, *Structures in seismic regions*. In the UK it is to be used in conjunction with BS EN 1998-6:2005.

NA.1 Scope

This National Annex gives:

- a) the UK decisions for the Nationally Determined Parameters described in the following subclauses of BS EN 1998-6:2005:
 - 3.1(1)**
 - 3.5(2)**
 - 4.1(5)P**
 - 4.3.2.1(2)**
 - 4.7.2(1)P**
 - 4.9(4)**
- b) the UK decisions on the status of BS EN 1998-6:2005 informative annexes;
- c) references to non-contradictory complementary information.

NA.2 Nationally Determined Parameters

UK decisions for the Nationally Determined Parameters described in BS EN 1998-6:2005 are given in Table NA.1.

Table NA.1 UK values for Nationally Determined Parameters described in BS EN 1998-6:2005

Subclause	Nationally Determined Parameter	Eurocode recommendation	UK decision
3.1(1)	Conditions under which the rotational component of the ground motion should be taken into account.	Structures taller than 80 m in regions where the product $a_g S$ exceeds 0,25 g	Use the recommended values.
3.5(2)	The lower bound factor β on design spectral values, if site-specific studies have been carried out with particular reference to the long period content of the seismic action.	$\beta = 0,1$	Use the recommended value.
4.1(5)P	Importance factors for masts, towers and chimneys.	Class I: $\chi = 0,8$ Class III: $\chi = 1,2$ Class IV: $\chi = 1,4$	For CC3 facilities, where a value for the reference return period T_{NCR} of 2 500 years has been adopted, $\chi = 1$ should be assumed. Where T_{NCR} has been assessed on a project-specific basis, χ should also be chosen on a project-specific basis. Further guidance is given in PD 6698.
4.3.2.1(2)	Detailed conditions, supplementing those in BS EN 1998-6:2005, 4.3.2.1(2), for the lateral force method of analysis to be applied.	A total height, H , not greater than 60 m and an importance class I or II	The lateral force method should not be used for consequence class CC3 facilities.
4.7.2(1) P	Partial factors for materials.	[None]	For steel, concrete, structural steel and masonry, use the values of partial factors for the design of new buildings given in the UK NA to BS EN 1998-1.
4.9(4)	Reduction factor ν for displacements at damage limitation limit state.	Class I & II: $\nu = 0,4$ Class III & IV: $\nu = 0,5$	In the absence of a project-specific assessment, adopt the recommended values. Further guidance is given in PD 6698.

NA.3 Decisions on the status of the informative annexes

NA.3.1 Linear dynamic analysis accounting for rotational components of the ground motion [BS EN 1998-6:2005, Annex A]

BS EN 1998-6:2005 informative Annex A may be used in the UK.

NA.3.2 Modal damping in modal response spectrum analysis [BS EN 1998-6:2005, Annex B]

BS EN 1998-6:2005 informative Annex B may be used in the UK.

NA.3.3 Soil-structure interaction [BS EN 1998-6:2005, Annex C]

BS EN 1998-6:2005 informative Annex C may be used in the UK.

NA.3.4 Number of degrees of freedom and of modes of vibration [BS EN 1998-6:2005, Annex D]

BS EN 1998-6:2005 informative Annex D may be used in the UK.

NA.3.5 Masonry chimneys [BS EN 1998-6:2005, Annex E]

BS EN 1998-6:2005 informative Annex E may be used in the UK.

NA.3.6 Electrical transmission towers [BS EN 1998-6:2005, Annex F]

BS EN 1998-6:2005 informative Annex F may be used in the UK.

NA.4 References to non-contradictory complementary information

The following is a list of references that contain non-contradictory complementary information for use with BS EN 1998-6:2005.

- PD 6698:2008, *Background paper to the UK National Annexes to BS EN 1998-1, BS EN 1998-2, BS EN 1998-4, BS EN 1998-5 and BS EN 1998-6.*

Bibliography

Standards publications

BS EN 1998-6:2005, *Eurocode 8 – Design of structures for earthquake resistance – Part 6: Towers, masts and chimneys*

PD 6698:2008, *Background paper to the UK National Annexes to BS EN 1998-1, BS EN 1998-2, BS EN 1998-4, BS EN 1998-5 and BS EN 1998-6*

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